Platelet rich plasma, or often termed as PRP, is concentrated blood plasma (composition of blood) that contains approximately five times the number of platelets found in normal circulating blood. Apart from red blood cells and white blood cells, our blood also contains cells known as platelets. The function of platelets is to promote healing and aid in the clotting of blood at the site of a wound. Platelets contain growth factors that promote regeneration of the cells in the body. PRP has been used in medicine for the last two decades.

The benefits of platelets and the regeneration of tissue is widely known and accepted in medical literature, but its usage in recent medical conditions is currently being studied. The use of PRP to treat hair loss has the potential to change the way hair loss is treated around the world as it’s a revolutionary, new treatment for hair loss.

Platelets aid in clotting of blood which is the key to the body's ability to heal wounds. The idea behind PRP therapy is that by increasing the platelet count in a wounded area, the body's healing capacity in that area would be accelerated.

The injection of platelet rich plasma (PRP) is a technique using the body’s own blood to heal itself. Doctors incorporate its use for the growth of thinning hair, transplanted hair, and wound healing. Many patients have benefited from this form of treatment.

How does PRP help in treating hair loss?

If the hair follicles or hair roots are healthy, the growth of the hair is healthy. Hair follicles survive on the nutrition they get from blood supply. If we introduce platelets by administering platelet rich plasma (PRP) in the area of damaged hair follicles, it amplifies the body's naturally occurring wound healing mechanism. Some doctors around the world believe PRP can be used to stimulate the growth of hair follicles preventing hair loss.

Procedure

PRP therapy is performed in 3 stages.

First, approximately 60-100ml of blood is collected from your vein. It's very similar to having a routine blood test performed at your doctor's clinic. The blood is collected by a nurse or perfusionist and placed in a special container. The container is then
placed in a machine called a centrifuge where your blood is spun for approximately 15 minutes. When the centrifuge has stopped spinning, your blood components have now been separated. The concentrated platelets have been separated from your normal whole blood. The PRP that contains abundant growth factors and stem cells is now ready to be applied to the scalp. The goal of this process is to increase the effects of PRP therapy in hair loss.

The rich concentration of platelets now has to be applied to the scalp where hair loss has begun. Therefore, preparing the scalp to receive the PRP is necessary. For this, the scalp is stimulated to activate the wound healing process. Topical anesthesia is applied on the portion of the scalp where PRP will be injected. To prepare the scalp for PRP application, a special micro needling roller device is used. This roller device causes microtrauma to the lower layer of the scalp that induces other healing and growth repair cells into action. The microneedle roller uses 192 unique needles made up of titanium that pierce into the skin and open the skin to create micro wounds. Since it uses less pressure, the pain is minimal. Immediately, the highly concentrated PRP is injected in many different areas of the scalp.

The new rolling device product is a medical breakthrough for physicians to utilize because it causes the patient much less pain than similar products used in the past. This device also saves a doctor much needed time when performing this form of treatment.

Occlusive dressing is then applied on the scalp and photodynamic treatment on the injected area is carried out to further enhance the effects of PRP. Mild discomfort is expected during the treatment. You can return to your normal activity almost immediately, but your scalp needs protection from the sun and excessive irritation.

There are many benefits of using PRP treatment to promote healing for hair growth. Highly concentrated growth factors in the form of platelets have been shown to generate new hair growth, thicken thinned out hair, and make hair transplants grow thicker and healthier.

However, not everyone is an ideal candidate to undergo this procedure. Patients who have an active infection in the scalp, history of a viral infection like shingles, diabetes, any clotting disorder, or patients who are on blood-thinning medications like aspirin and immunosuppressive drugs like cyclosporine are not candidates for this procedure.

Also, if hair follicles are completely lost, this procedure is less likely to help patients. Patients may need to opt for hair transplant surgery.
Post procedure

The procedure takes one to two hours depending on amount of hair loss. Since an inflammatory process is initiated at the wound site, there may be mild pain or discomfort felt by the patient at the site where PRP is injected. Patient are not advised not to take any anti-inflammatory medication since it may interfere in the natural healing process of PRP. Patients generally have to receive this treatment multiple times before they can see any results. However, some patients may only have to receive this therapy once a year.

Acell plus PRP

ACell (Matri-stem) has been mixed with PRP (Platelet Rich Plasma) by many cosmetic surgeons as a form of treatment for specific hair loss candidates to slow down genetically induced hair loss or even other types of hair loss that includes thinning of hair.

ACell is the by-product of urinary bladder tissue of pigs that is stripped of all of it’s cells before introducing to humans. It has remarkable regenerative properties and works by recruiting huge numbers of adult stem cells to the site of injury. It provides growth factors and proteins necessary for tissue regeneration. It does not require the harvesting of tissue, but PRP is harvested into the tissue. A premixed combination of PRP and Acell is thought to both prevent and regenerate hair in people facing genetic hair loss.

Acell is available in a powder form, and when mixed with PRP, it is injected into the affected scalp. This combination acts like a hair evolution accelerator.

However, all of these inventions are still being studied. Though these procedures are performed on patients in different cosmetic clinics at a successful rate, one still needs to look into more scientific data before deciding to opt for this therapy.

Complications

The injected area may have mild swelling, it may even be tender to touch. Swelling may go away in few hours after the procedure while tenderness may go away in a couple of days. There is a possibility of the area getting infected, but this is rare.

Safety
PRP does not pose any danger of allergy, hypersensitivity, or foreign-body reaction and it is a safe choice for many patients.

Prognosis

Prognosis is generally good, but it varies from person to person. Most of the clinics practicing this therapy have reported almost 80% success rate.

Questions to ask your doctor about prp for hair loss treatment

1. How much does the treatment cost?
2. Is it covered by insurance?
3. How many treatments will I need?
4. Is the procedure painful?
5. How safe is this procedure?
6. How much scientific data does this procedure have to support itself?
7. Will my hair regrow completely and will be as thick as it was before?
8. Are there any long term side effects of this procedure?
9. Is it approved by the FDA?